PATENT ABSTRACTS OF JAPAN

(11)Publication number:

2001-342100

(43) Date of publication of application: 11.12.2001

(51)Int.Cl.

C30B 29/38

C30B 25/18 H01L 33/00

(21)Application number: 2000-301301

(71)Applicant: TOSHIBA CORP

(22)Date of filing:

29.09.2000

(72)Inventor: NISHIO JOJI

ISHIKAWA MASAYUKI

(30)Priority

Priority number: 2000090158

Priority date: 29.03.2000

Priority country: JP

(54) MANUFACTURING METHOD OF SUBSTRATE FOR EPITAXIAL GROWTH AND MANUFACTURING METHOD OF SEMICONDUCTOR DEVICE USING SUBSTRATE FOR THIS **EPITAXIAL GROWTH**

(57)Abstract:

PROBLEM TO BE SOLVED: To efficiently and easily obtain a substrate for epitaxial growth of a GaN compound semiconductor monocrystal membrane which has little crystal defect and favorable surface morphology. SOLUTION: This method comprises at least the steps of (a) epitaxially growing a first GaN compound semi conductor monocrystal membrane 303 on a bulk crystal substrate 301; (b) epitaxially growing a GaN compound semiconductor monocrystal membrane 304 containing In; (c) epitaxially growing a second GaN compound semiconductor monocrystal membrane 305; and separating a second GaN compound semiconductor monocrystal membrane 305 from the bulk crystal substrate 301 and making it the substrate for the epitaxial growth.

